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San Juan Basin Action Plan

LAND USE CONTROLS AND CONSTRAINTS TECHNICAL REPORT

for the
Environmental Impact Statement
on Public Service Company of New Mexico's
Proposed New Mexico Generating Station
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Dear Interested Citizen:

Attached is one of twenty-two technical reports developed as a basis for writing the Environmental Impact Statement on Public Service Company of New Mexico's Proposed New Mexico Generating Station and Possible New Town (NMGS EIS). (A list of the technical reports is attached.)

These technical reports provide detailed information on the existing environment, methods used for the impact analysis, and related data supportive of the analysis and conclusions presented in the EIS. These reports should be retained for use with the Draft and Final EIS and other documents related to BLM's San Juan Basin Action Plan (SJBAP).

The Draft NMGS EIS will be filed with the Environmental Protection Agency and released for public review on November 30, 1982. Comments on the Draft EIS will be due by close of business February 7, 1983, at the BLM New Mexico State Office. Because of the large volume of material presented in the technical reports, the BLM is distributing these reports in advance of the Draft EIS to provide sufficient time for public review. The technical reports will be available for public review at the places indicated on the attached list. Copies will also be available from the BLM New Mexico State Office, U.S. Post Office and Federal Building, Santa Fe, for a copy fee.

Informational public meetings are scheduled for December 1982 to provide a public forum to clarify questions and concerns about the SJBAP proposals and the related environmental documents, which will all have been issued by that time. The meetings are scheduled as follows:

- December 14, Civic Center, Farmington, 3 to 9 PM
- December 14, Convention Center, Albuquerque, 3 to 9 PM
- December 15, Chapter House, Crownpoint, 3 to 9 PM
- December 16, Holiday Inn, Gallup, 3 to 9 PM
- December 16, Kachina Lodge, Taos, 3 to 9 PM

In addition, formal public hearings will be held in January 1983 to solicit public comments on the SJBAP Proposals. These meetings are scheduled as follows:

- January 10, Chapter House, Crownpoint, beginning at 1:00 PM
- January 12, Civic Center, Farmington, beginning at 9:00 AM
- January 14 (and 15th if necessary because of the number of registrants), Four Seasons Motor Lodge, Albuquerque, I-40 and Carlisle Blvd., beginning at 9:00 AM (each day)

Questions on the public meetings, hearings, and the technical reports themselves should be directed to:

Leslie M. Cone
NMGS Project Manager
BLM, New Mexico State Office
P.O. Box 1449
Santa Fe, NM 87501
(505) 988-6184 FTS 476-6184

Sincerely yours,

Charles W. Luscher

Charles W. Luscher
State Director, New Mexico

List of Technical Reports

1. Purpose and Need
2. Project Description
3. Alternatives to the Project
4. Site Alternatives
5. Permit Reconnaissance
6. Air Quality
7. Geologic Setting
8. Mineral Resources
9. Paleontology
10. Soils, Prime and Unique Farmlands
11. Hydrology
12. Water Quality
13. Vegetation
14. Wildlife and Aquatic Biology
15. Threatened and Endangered Species
16. Cultural Resources
17. Visual Resources
18. Recreation Resources
19. Wilderness Values
20. Transportation
21. Social and Economic Conditions
22. Land Use Controls and Constraints

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Individual copies of the technical reports can be obtained for a copy fee. Inquiries should be directed to:

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Title Records and Public Assistance Section (943B)
U.S. Post Office and Federal Building
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Santa Fe, NM 87501
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Copies of the reports are available for public review at the locations listed below. [Formal and informal cooperating agencies are denoted by an asterisk (*).]

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Santa Fe, NM 87501
(505) 988-6184 FTS 476-6184

San Juan Energy Projects Staff (911)
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Santa Fe, NM 87501
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Room 2016
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Santa Fe, NM 87501
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Santa Fe, NM 87501
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P.O. Box 568
Farmington, NM 87401
(505) 325-3581

Taos Resource Area Office
Montevideo Plaza
P.O. Box 1045
Taos, NM 87571
(505) 758-8851

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Salt Lake City, UT 84147
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Santa Fe, NM 87501
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National Park Service*
Environmental Coordination Office
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Field Supervisor, Ecological Services
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Albuquerque, NM 87107
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P.O. Box 2770
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(505) 827-3326

New Mexico Historic Preservation Bureau*
State Historic Preservation Officer
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Santa Fe, NM 87503
(505) 827-2108

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Villagra Building
Santa Fe, NM 87503
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New Mexico Public Service Commission*
Bataan Memorial Building
Santa Fe, NM 827-3361
(505) 827-3361

New Mexico State Engineer's Office*
Bataan Memorial Building
Santa Fe, NM 87503
(505) 827-2423

New Mexico State Planning Office*
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Santa Fe, NM 87503
(505) 827-5191

OTHER ORGANIZATIONS

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Albuquerque, NM 87158
(505) 848-2700

Woodward-Clyde Consultants, Inc.
3 Embarcadero Center, Suite 700
San Francisco, California 94111
(415) 956-7070

PUBLIC AND UNIVERSITY LIBRARIES

Reading copies of the NMGS EIS and associated technical reports will be available at the following public and university libraries:

State and Public Libraries

Albuquerque Public Library
501 Copper Avenue NW
Albuquerque, NM 87102

Aztec Public Library
201 W. Chaco
Aztec, NM 87401

Crownpoint Community Library
c/o Lioness Club, P.O. Box 731
Crownpoint, NM 87313

Cuba Public Library
Box 5, La Jara
Cuba, NM 87027

Farmington Public Library
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Farmington, NM 87401

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Gallup, NM 87301

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Shiprock Branch
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Shiprock, AZ 87420

Northern New Mexico Community College
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Espanola, NM 87532

New Mexico State University
San Juan Campus
4601 College Blvd.
Farmington, NM 87401

University of New Mexico, Gallup Campus
Learning Resources Center
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LAND USE CONTROLS AND CONSTRAINTS TECHNICAL REPORT

for the

Environmental Impact Statement on Public Service Company of New Mexico's Proposed New Mexico Generating Station and Possible New Town

Prepared by

Woodward-Clyde Consultants

for the

U.S. Department of the Interior
Bureau of Land Management

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NEW MEXICO GENERATING STATION

1.0

INTRODUCTION

BACKGROUND

Included in the recent Council on Environmental Quality Regulations (1979) are several important objectives to reduce excessive paperwork in the preparation of environmental impact statements (EISs):

- Discuss only briefly issues other than significant ones.
- Emphasize the portions of the EIS that are useful to decision makers and the public and reduce emphasis on background material.
- Prepare analytic rather than encyclopedic EISs.

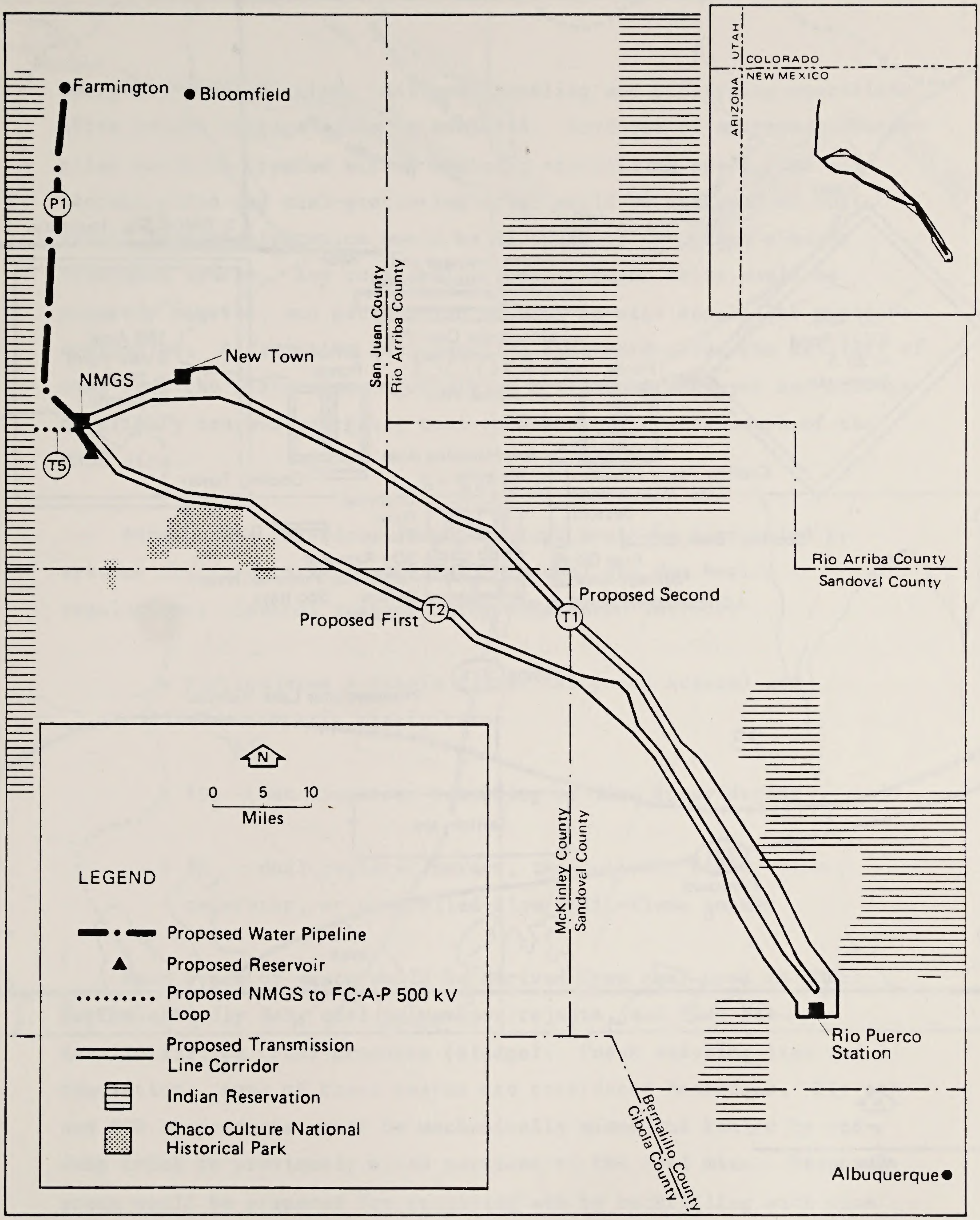
In order to accomplish these objectives and still provide the depth and background required for an analytic impact statement, this technical report has been prepared for the New Mexico Generating Station (NMGS) project. In this report, impacts that were not identified as significant but which are still considered important by the public or technical specialists are analyzed. Background material is provided for those issues and impacts that were considered necessary for the comparison of alternatives. Impacts that were not identified as significant or important by the public and by technical preparers are summarized, and reasons for their elimination from detailed analysis are discussed.

SUMMARY DESCRIPTION OF PROJECT COMPONENTS

Public Service Company of New Mexico (PNM) proposes to construct a 2000-megawatt (MW) coal-fired electric generation plant approximately 35 miles south of Farmington, New Mexico, in San Juan County (Map 1-1). The proposed NMGS, at ultimate development, would have four 500-MW generating units. Each generating unit would include a turbine generator area, coal pulverizer area, boiler area, particulate removal system, SO_2 removal system, and chimney stack. The proposed arrangement of these and other power plant components is shown in Figure 1-1. For the environmental analysis, it was assumed that commercial operation of the first 500-MW unit would begin in 1990 and that other units would start operating during the 1990s.

Coal for NMGS would be acquired through long-term contracts with Sunbelt Mining and Arch Minerals (Proposed Action) or other producers in the San Juan Basin (alternative coal supply). Coal acquired from a joint venture of Sunbelt and Arch Minerals would be supplied from surface mines (referred to as the Bisti mine in this analysis) in the immediate vicinity of the proposed plant site. Coal acquired from other producers in the San Juan Basin would be hauled from mines located as much as 30 miles from the proposed plant site. Coal required for NMGS would average 7.5 million tons per year, or a total of 300 million tons over the 40-year project life.

The proposed fuel-handling system would involve hauling coal from the Bisti mine (or other mine locations) by truck to a receiving facility located adjacent to the NMGS site. Coal would then be transferred via conveyor belt from the receiving station to active or



Note: For more information, see the location maps in Appendix G of the EIS.

Source: BLM 1982.

Map 1-1. GENERAL LOCATION OF PROPOSED ACTION

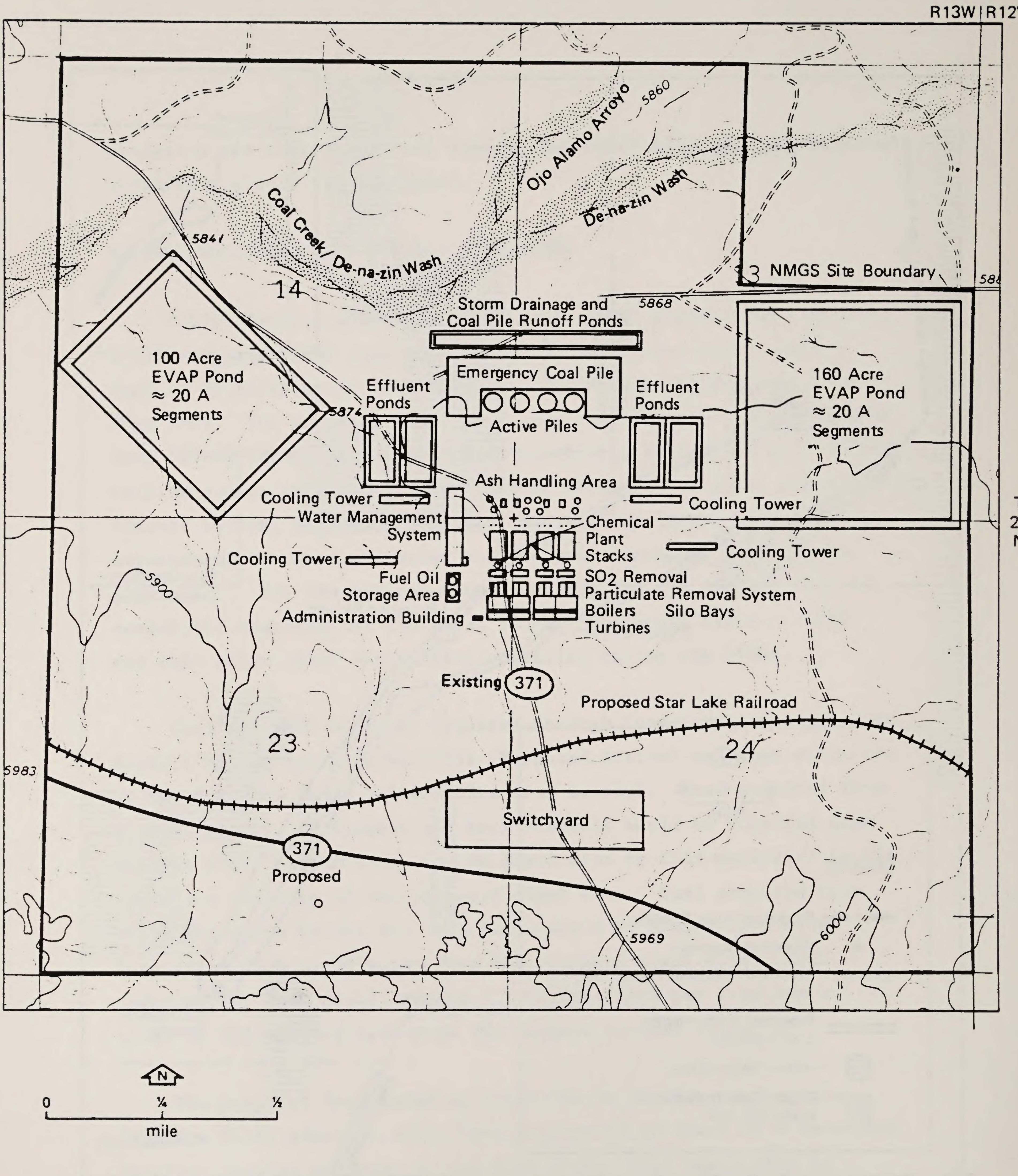


Figure 1-1. STATION LAYOUT

emergency storage piles. All coal-handling and processing operations after active storage would be enclosed. Surfaces of emergency storage piles would be treated with a nontoxic stabilizing agent, and all storage piles and coal-processing areas would be designed so that runoff from precipitation would be diverted to the plant's water treatment system. Any coal spills from conveyor belts would be promptly removed, and percolation beneath on-site stockpiles would be controlled. Alternative fuel-handling systems include the delivery of coal from the Bisti mine to receiving station by conveyor and storage of primary crushed emergency coal on Sunbelt property north of the NMGS site.

Atmospheric emissions from the plant would be controlled by systems designed to meet applicable federal and New Mexico regulations. Control systems being considered include:

- Particulates - fabric filter (Proposed Action) and electrostatic precipitator
- SO_2 - wet limestone scrubbing or lime spray drying
- NO_x - dual-register burner, tangentially fired steam generator, or controlled-flow/split-flame burner

Four types of waste would be derived from coal used in NMGS: bottom ash, fly ash, coal pulverizer rejects, and flue gas desulfurization (FGD) products (sludge). Under existing laws and regulations, none of these wastes are considered hazardous. Fly ash and FGD by-products would be mechanically mixed and hauled by end-dump truck to previously mined portions of the coal mine. Disposal areas would be prepared for receiving ash by backfilling with mine overburden. Ash would then be dumped and spread in layers over the mine overburden. After the ash was placed and spread, it would be covered with layers of overburden and surface soil or topsoil and then a vegetative cover would be established. Bottom ash and pulverizer rejects would be collected for disposal in dewatering bins and then hauled by end-dump trucks for disposal into previously mined portions of the coal mine. Procedures for disposal would be the same as for fly ash.

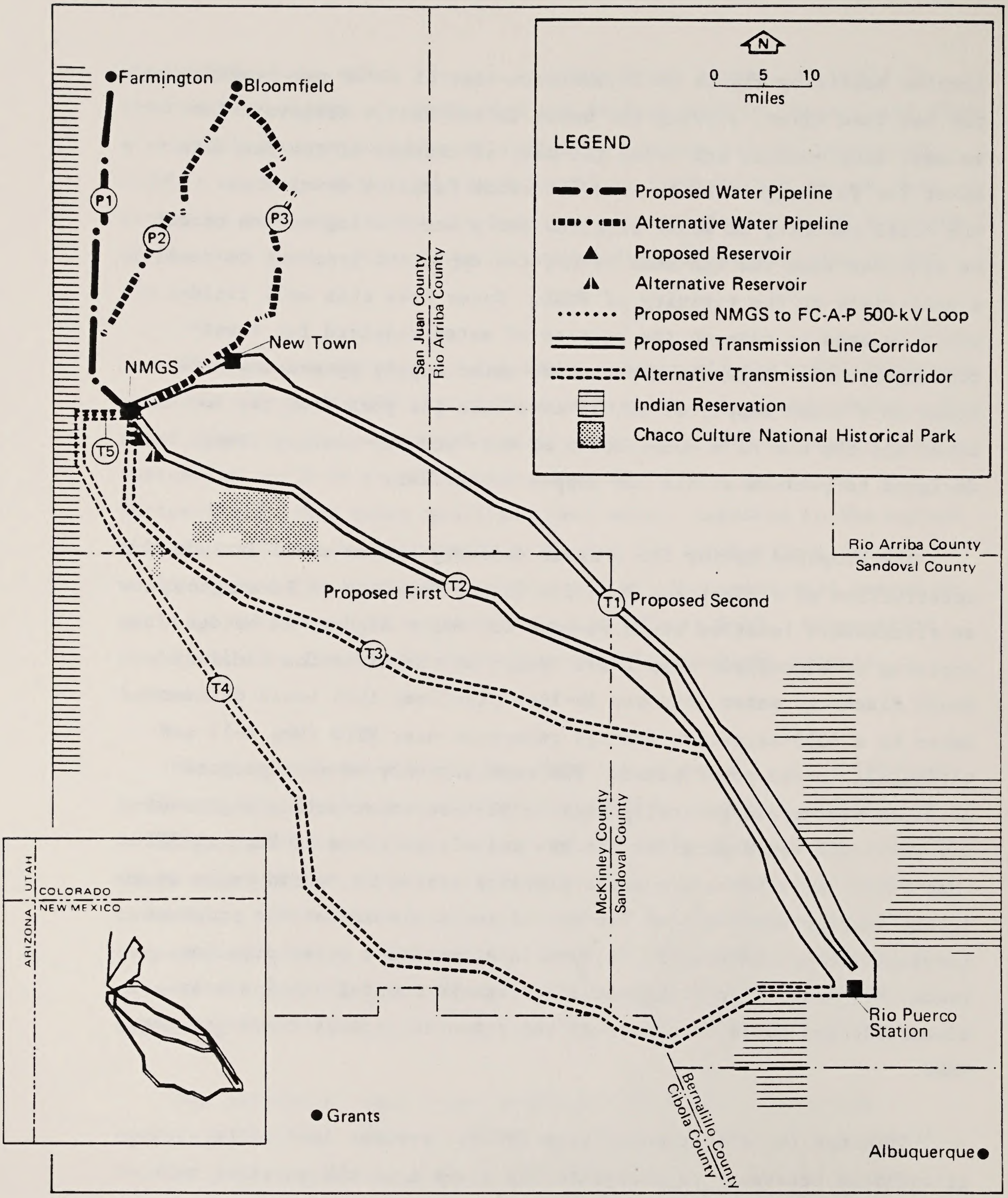
The water management system would contain all equipment necessary to treat and supply all the plant makeup water and potable water. The power plant would be designed and operated as a zero-discharge plant; wastewater would be reused by cascading it to uses requiring successively lower water quality. Used water, degraded to the extent that it could not be economically treated for further in-plant use, would be used for transport and disposal of plant-generated wastes or would be discharged to evaporation ponds (Figure 1-1). Evaporation ponds would be lined with impervious material to limit seepage losses.

Water supplies available for NMGS are believed to be sufficient to construct an all-wet heat-rejection system, based on evaporative cooling, and to use forced-draft cooling towers (Figure 1-1). Cooling-tower makeup water would be drawn from the nearby raw-water storage reservoir. The makeup water would replace the tower losses from evaporation, drift, and blowdown. If sufficient water could not be secured for a totally evaporative system, a water-cooling system employing both dry and conventional wet towers might be required.

The estimated water requirement for NMGS, with four units operating at rated capacity and a heat-rejection system equipped with wet-cooling towers, would be 35,000 acre-feet per year. In order to supply this quantity of water to NMGS, the Proposed Action would involve acquiring rights to 35,000 acre-feet of water per year from the San Juan River, storing the water in the Navajo Reservoir for release upon demand, and using the natural channel of the San Juan River for delivery of water to a diversion facility downstream. If the total quantity of water required for a wet-cooling system cannot be acquired from the San Juan River, the applicant proposes to develop a well field in the vicinity of NMGS. Water from this well field would be used to make up the balance of water required for a wet-cooling system. A second alternative water supply system would be based on a total supply of 20,000 acre-feet per year from the San Juan River and the use of a combination of wet- and dry-cooling towers designed to perform within the supply constraint.

The Proposed Action for a water delivery system would include the construction of a diversion facility in the vicinity of Farmington; an alternative location would be near the State Highway 44 bridge crossing at Bloomfield (Map 1-2). Pumps at the diversion facility would discharge water into two 36-inch pipelines that would deliver water to a 4000-acre-foot storage reservoir near NMGS (Map 1-1) and ultimately to the power plant. The approximately 40-mile proposed pipeline (P1) would generally require 90-foot construction rights-of-way (ROW) and would parallel the new and old portions of Highway 371 (Map 1-1). An alternative water pipeline route, P2, would begin at an intake pumping station near Bloomfield and would end at the proposed terminal storage reservoir. A 49-mile alternative water pipeline route, P3, would also originate at an intake pumping station near Bloomfield and would terminate at the proposed storage reservoir near NMGS.

In order to deliver power from NMGS to various load centers, it would be necessary to integrate the plant into the existing bulk



Note: For more information, see the location maps in Appendix G of the EIS.

Source: BLM 1982.

Map 1-2. GENERAL LOCATION OF ALTERNATIVES INCLUDING THE PROPOSED ACTION transmission systems of PNM and neighboring utilities. Thus the proposed transmission system would consist of a 500-kilovolt (kV) loop linking NMGS with PNM's approved 500-kV Four Corners-Ambrosia-Pajarito (FC-A-P) line, located approximately 5 miles west of NMGS, and two 500-kV lines linking NMGS with the Albuquerque distribution and load center at the proposed Rio Puerco Station (Map 1-1). The NMGS-Albuquerque system would be installed in phases: the 500-kV loop in 1990 with commencement of commercial operation of Unit 1, the first 500-kV line with Unit 2 in 1993, and the second 500-kV line with Unit 4 in 1998.

Four routes are considered technically and economically feasible for construction of the 500-kV transmission system. Route T2 is proposed for the first 500-kV line and route T1 is proposed for the second 500-kV line; routes T3 and T4 are alternatives to the Proposed Action. The total distance traversed would be similar for the two proposed and two alternative corridors: 101 miles (T2), 107 miles (T1), 105 miles (T3), and 126 miles (T4). With the exception of tower sites, the proposed 200-foot ROW could support other compatible land uses, such as grazing. PNM would keep the transmission line ROW closed and would patrol the line by helicopter each month. Lands disturbed by heavy equipment and temporary access roads would be restored to their original condition.

Table 1-1 displays construction work force estimates over time. Construction employment for station facilities would reach peaks of 1515 employees in 1987 and 1530 employees in 1992. Operations employment at station facilities would increase steadily, from 30 employees in 1989 to 900 employees in 1999 when all four units are expected to be on-line.

Table 1-1. NMGS CONSTRUCTION AND OPERATION EMPLOYMENT

			NMGS												
			Construction					Operation							
Year	Intake Pipeline and Reservoir	500-kV Trans-mission Line	Unit 1	Unit 2	Unit 3	Unit 4	Total	Unit 1	Unit 2	Unit 3	Unit 4	Total	Total Employment	Annual Change
1985	—	—	85	—	—	—	85	—	—	—	—	—	85	+85
1986	—	—	800	—	—	—	800	—	—	—	—	—	800	+715
1987	115	—	1515	—	—	—	1630	—	—	—	—	—	1630	+830
1988	295	104	1180	30	—	—	1505	—	—	—	—	—	1505	-125
1989	—	—	360	450	—	—	914	30	—	—	—	30	944	-560
1990	—	—	100	940	40	—	1080	200	—	—	—	200	1280	+336
1991	—	—	—	750	570	—	1320	250	—	—	—	250	1570	+290
1992	—	—	—	270	1260	—	1530	250	24	—	—	274	1804	+234
1993	—	—	—	105	955	30	1090	250	160	—	—	410	1500	-304
1994	—	78	—	—	325	435	838	250	200	30	—	480	1318	-182
1995	—	—	—	—	90	940	1030	250	200	200	—	650	1680	+362
1996	—	—	—	—	—	775	775	250	200	250	—	700	1475	-205
1997	—	—	—	—	—	255	255	250	200	250	24	724	979	-496
1998	—	—	—	—	—	95	95	250	200	250	160	860	955	-24
1999	—	—	—	—	—	—	0	250	200	250	200	900	900	-55

Source: PNM 1980, unpublished data.

According to PNM (unpublished data, 1980), estimated construction employment skill requirements would be as follows:

Skill	Percent of Total Construction Work Force
Boilermakers	9.4
Pipefitters	14.2
Electricians	14.4
Carpenters	5.6
Ironworkers	10.0
Operators	10.0
Laborers	9.0
Teamsters	4.1
Cement masons	0.8
Millwrights	3.3
Insulators	4.0
Sheetmetal workers	1.1
Painters	1.2
Others	0.5
Supervision	12.4

The above estimates are averaged for construction of all four units.

SAN JUAN BASIN ACTION PLAN OVERVIEW AND RELATIONSHIP OF THE NMGS EIS TO ACTIONS INCLUDED IN THE PLAN

The proposed site for the NMGS is located in the San Juan Basin of northwestern New Mexico. The Bureau of Land Management (BLM) is responsible for the management of much of the land and mineral resources in this area, and currently has six separate but interrelated proposals under consideration within the basin. In order to respond to these, the BLM has developed a San Juan Basin Action Plan (SJBAP). This plan provides for the organizational arrangements whereby the environmental analyses and decision making can be implemented in a timely and efficient manner. The plan describes the process for preparation of three site-specific EISs (including the NMGS EIS) and three Environmental Assessments (EAs):

- Coal Preference Right Lease Applications (EA)
- San Juan River Regional Coal Leasing (EIS)
- Wilderness Study Areas (WSAs) (EIS)
- New Mexico Generating Station (EIS)
- Ute Mountain Land Exchange (EA)
- Bisti Coal Lease Exchange (EA)

In addition to these documents, the action plan provides for the preparation of a Cumulative Overview (CO). The CO is intended to focus on the cumulative impacts that would result from the proposed actions analyzed in the EISs and EAs listed above and therefore to facilitate public review and decision making. As a result of this organization, the impact analysis in the NMGS EIS and technical background reports concentrates on the impacts expected to result from the specific NMGS components proposed. The cumulative impacts expected to result from the proposed NMGS, in addition to the cumulative impacts of other proposals to be developed in the same time period, are described in the CO.

BASELINE CONDITIONS ASSUMED FOR THE NMGS TECHNICAL REPORT IMPACT ANALYSES

The site-specific impact analysis for this technical report was based on the affected environment and available resources that would be existing at the time of construction and operation of the NMGS facility. Since construction at the NMGS facility would not begin until 1985, certain assumptions regarding project development in the San Juan Basin were necessary. Two levels of project development were considered, along with criteria for each, in developing a status for the various non-SJBAP actions proposed for the San Juan Basin area.

- Baseline 1 - The projects considered in this level of development are those that have approval and are to be built or under construction in 1985. This level represents the projected existing environment without the proposals included in the SJBAP.

- Baseline 2 - The projects considered in this level are in some phase of the application stage. In this level, Baseline 1 projects are added to any projects in Baseline 2 along with any revision in resource production or uses (e.g., coal).

Where differences in Baselines 1 and 2 affect the results of impact analyses, discussion is provided. If no differences are identified, it should be assumed that consideration of the two different baselines did not alter the impact analyses.

A complete list of projects and comprehensive location maps for Baselines 1 and 2 are provided in Appendix C of the NMGS EIS.

ORGANIZATION OF THE REPORT

Section 2.0 of this technical report describes the assumptions and methodological approach used in the assessment of potential impacts of the Proposed Action on the affected environment. In addition, Section 2.0 contains a definition of the study area and identification of data sources.

Section 3.0, Affected Environment, contains baseline data on existing conditions in the study area, as well as projections of future conditions without the Proposed Action. Information on historical trends is presented where it is useful in providing a basis for predicting most likely future trends. The description of projected future trends takes into consideration the changes in the environment that are expected to occur as a result of the projects identified in Baseline 1. This provides a reasonable estimate of the future existing environment against which the potential impacts of the Proposed Action and alternatives can be assessed.

Section 4.0 describes the potential effects of implementing the Proposed Action and alternatives. Impacts identified are measured against indicators of significance in order to estimate the importance of the impact to the affected human environment. (Potential impacts associated with alternatives to the Proposed Action are compared in Section 9.0.)

In Section 5.0, mitigation measures are suggested. These measures would help to alleviate the potentially significant adverse impacts or enhance the beneficial impacts identified in the Section 4.0 analysis. Those potentially adverse impacts for which no appropriate mitigation measures have been suggested are discussed in Section 6.0 as "unavoidable adverse impacts."

2.0
FRAMEWORK FOR ANALYSIS

Federal regulations require that potential conflicts between the Proposed Action and alternatives and the objectives of federal, state, local, and tribal land use plans, policies, and controls be identified. Where inconsistency exists, "the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law" (40 CFR 1506.2).

The purpose of this study is to determine the compatibility of the Proposed Action with existing land use controls and constraints in the affected environment. To this end, existing land use plans, policies, and controls for potentially affected federal, state, tribal, county, and local lands are reviewed.

While it would be necessary to acquire a variety of access and other approvals (see the Authorizing Actions section in the EIS) to implement the Proposed Action and alternatives, these do not constitute conflicts (i.e., nonpermissible activities) with existing land use plans or controls.

The area of potential impact from the proposed project is defined as those areas that may be affected directly (e.g., as a result of the construction of any of the proposed project components or alternatives) or indirectly (e.g., as a result of population increase or redistribution). This area includes parts of San Juan, McKinley, Sandoval, and Cibola counties, New Mexico; the cities and towns of

Farmington, Aztec, Bloomfield, and to a limited extent, Crownpoint and Thoreau; the eastern portion of the Navajo Indian Reservation, portions of the Zia Indian Reservation; and the checkerboard area east of the Navajo Indian Reservation. The checkerboard area includes interspersed federal Indian (tribal and allotted), private, and state lands.

Information sources for the study include:

- Review of applicable regulations, plans, and policies of the various government agencies (for example, the BLM Albuquerque District Office Chaco/San Juan Management Framework Plan Update for Coal, September 1981)
- Review of existing environmental assessments, studies, working papers, analyses, and maps of the affected area
- Contacts with federal, state, tribal, and local government officials

According to the Council on Environmental Quality,

> The term "land use plans" includes all types of formally adopted documents for land use planning, zoning and related regulatory requirements . . . the term "policies" includes formally adopted statements of land use policy as embodied in laws or regulations. (Federal Register 1981)

Proposed land exchanges, mineral leasing programs, proposed water supply projects, and Navajo tribal plans to select portions of the Proposed Action lands as part of the Navajo share in the settlement of the Navajo-Hopi land dispute do not fall within the definition of land use plans or policies and therefore are not included in this analysis. A discussion of the proposed Navajo tribal land selection, however, has been included in the Appendix for informational purposes.

3.0
AFFECTED ENVIRONMENT

Formally adopted or formally proposed land use plans and policies in effect in the study area are listed in Table 3-1 and are summarized by jurisdiction in this section.

FEDERAL

A large quantity of federally controlled lands and minerals lie within the affected area. For example, only 6 percent of San Juan County land surface is privately owned. Sixty percent is either owned by or held in trust for the Navajo Nation, 29 percent is controlled by federal agencies such as BLM, and 5 percent is state-owned (New Mexico State Planning Division 1981). Specific federal agency plans are described below.

Bureau of Land Management

As required by the Federal Land Policy and Management Act of 1976 (FLPMA), BLM has prepared comprehensive Management Framework Plans (MFP) for various planning units in the area. The MFP is a planning document prepared after numerous studies of the affected resources. The MFP includes resource recommendations based on trade-offs and compromises guided by multiple use analysis. The MFP for the Chaco/San Juan Planning Unit (updated 1981) covers the area of the proposed plant site, reservoir, and a portion of the rights-of-way (ROW) corridors. Relevant major recommendations in this MFP include the following:

Table 3-1. SUMMARY OF MAJOR PLANNING JURISDICTIONS AND IDENTIFICATION OF LAND USE PLANS

Agency	Formally Adopted or Proposed Land Use Plan or Policy
Federal	
Bureau of Land Management	Management Framework Plans
U.S. Forest Service	National Forest Land and Resource Management Plans (In progress)
Bureau of Reclamation	Gallup-Navajo Indian Water Supply Project Plan (In progress)
State	
State Planning Division	San Juan County Growth Management and Housing Plan*
	New Mexico Land Use Planning Process*
	A-95 Review
Tribal	
Navajo Tribe	Overall Economic Development Program*
	Crownpoint: Comprehensive Land Use Plan*
	Navajo Agricultural Products, Inc., Five-Year Plan
Local	
San Juan County Commission	San Juan County: The Next Decade. Land Use Plan*
San Juan County Planning Department	San Juan County Energy Impact Strategy Program*
McKinley Area Council of Governments	Triennial Review of Housing and Land Use Elements*

*As indicated in the text, these plans are not enforced by any zoning or other regulatory requirements.

- Make BLM public lands available for consideration for the Ute Mountain Exchange.

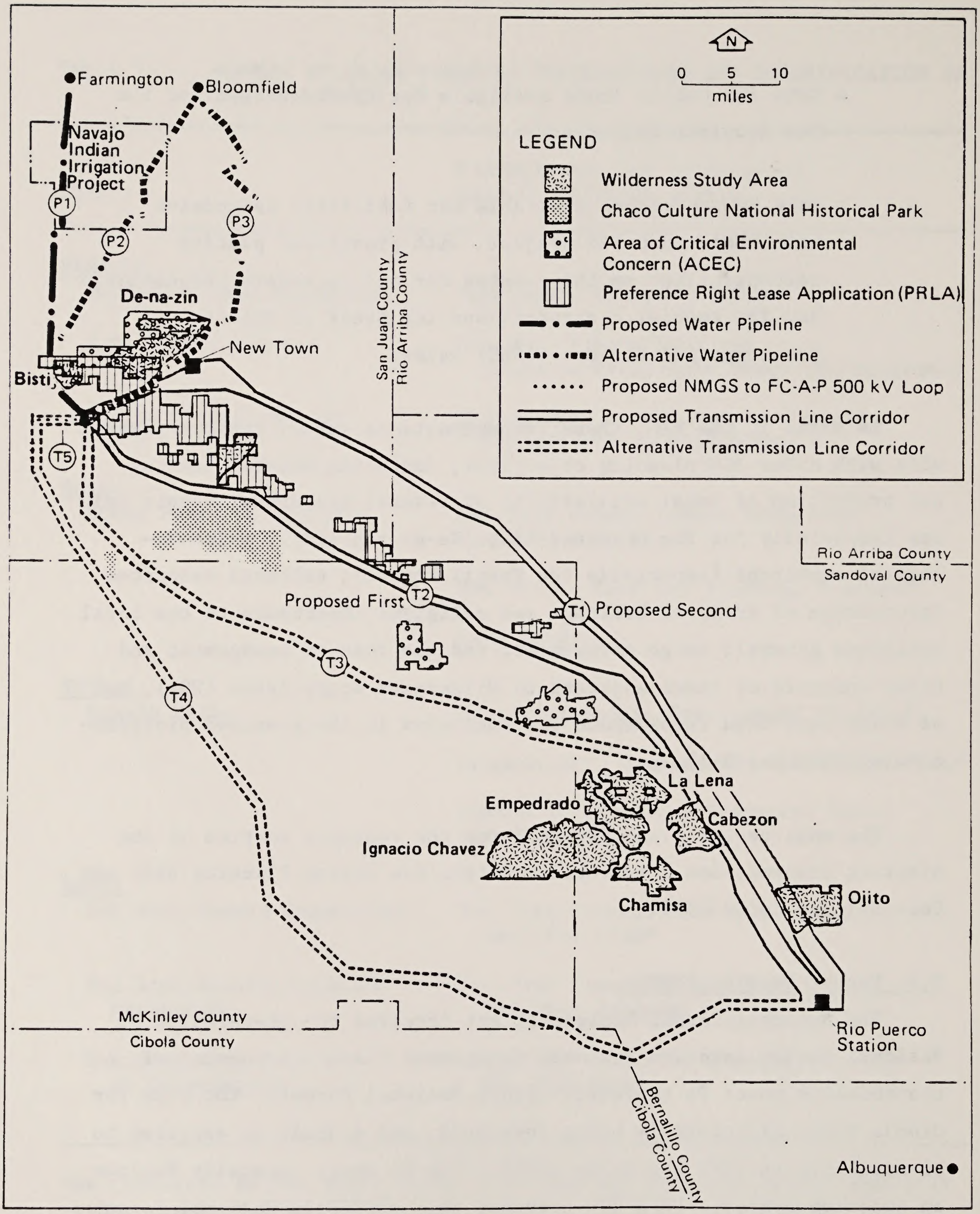
- Make ROW corridors available for facilities associated with PNM's proposed project, with provisions placing responsibility on the grantee for any necessary relocation, and for special considerations for Areas of Critical Environmental Concern (ACEC) values.

As noted in the MFP, these recommendations entail certain tradeoffs with other BLM planning objectives, including mineral leasing and protection of legal availability of federal resources; scenic values (especially for the proposed Bisti/De-na-zin ACEC); paleontological resources (especially the Fossil Forest); cultural resources (protection of areas of heritage and religious importance to the local residence groups); range management; and the loss of management and other controls on lands adjacent to Wilderness Study Areas (WSA), two of which have been recommended for inclusion in the proposed Bisti/De-na-zin ACEC (Map 3-1).

The most recent plans prepared for the southern portion of the electric transmission line corridors (the Rio Puerco Planning Unit and Cabezon) are dated 1972.

U.S. Forest Service (USFS)

The National Forest Management Act requires the preparation of National Forest Land and Resource Management Plans. A portion of transmission route T4 traverses Cibola National Forest. The plan for Cibola National Forest is being developed, and a draft is expected to be available in 1983 (La Salle 1982). The T4 route generally follows an existing approved USFS ROW corridor through Cibola National Forest and as such is unlikely to conflict with future USFS plans.



Source: BLM 1982.

Map 3-1. POTENTIAL LAND USE CONSTRAINTS IN THE PROJECT AREA

Other Federal Agencies

Other federal agencies having planning jurisdiction over lands in the area of the proposed project include the National Park Service and the Bureau of Reclamation. None of the proposed project components are located within lands under the jurisdiction of the Park Service. The proposed project or alternatives would not conflict with any Bureau of Reclamation water resource project plans, although a ROW approval would have to be obtained to cross lands withdrawn for the proposed Gallup-Navajo Indian Water Supply Project.

REGIONAL

Regional organizations such as Four Corners Governors Incorporated (created on September 30, 1981, upon termination of the Four Corners Regional Commission) and the Western Governors Policy Office were established primarily for the purpose of providing information and promoting cooperation on energy planning, policy, and developments. No regional organizations were identified which have planning jurisdictions that could affect the proposed project.

STATE OF NEW MEXICO

Comprehensive planning for New Mexico is done by the State Planning Division, which has no regulatory enforcement functions. The Division does, however, administer federal planning programs such as HUD 701, HUD Community Development, FmHA Energy Impact, FmHA Rural Development, and EDA Economic Development Planning. Several of these programs are currently being phased out. These planning programs are generally aimed at preparing communities for the effects of energy development.

State policy regarding energy facility siting is broad and not project-specific, for example, "To assure that the location of energy facilities will provide minimal adverse effects on the environment. . . . To develop mineral resources to preclude New Mexico becoming an 'energy colony' for the rest of the nation. . . . To carefully monitor energy growth projects to lessen the boom/bust syndrome in overburdened communities. . . ." (New Mexico State Planning Division 1977).

To ensure that a specific project conforms with state plans, goals, policies, and programs, the Planning Division coordinates the A-95 review process. This refers to the federally mandated Office of Management and Budget Circular A-95 review of federal actions by state and local agencies.

TRIBAL

Navajo

As with other government jurisdictions, many agencies within the Navajo Tribal Government perform planning functions. These agencies include the Navajo Division of Resources (including Land Development, Environmental Administration, Eastern Navajo Land Commission, Navajo-Hopi Land Dispute Commission); Division of Community Development; Division of Economic Development; and the recently created Energy Development Authority (EDA). Tribal economic development and energy-impact-related planning has been done with EDA, HUD, and FmHA grants (Navajo Tribe 1978, 1981). As is the case with similar state-level programs, these lack enforcement provisions.

The Navajo Indian Irrigation Project (NIIP) is governed by the Navajo Agricultural Products, Inc., Five-Year Plan, which outlines how NIIP will be used. This plan is updated annually. Navajo tribal plans and policies for selecting lands for the Navajo share in the settlement of the Navajo-Hopi land dispute are discussed in the Appendix.

Zia

Proposed transmission line corridors would cross a small portion of the Zia Reservation. No general reservation land use policies were identified. Rights-of-way are handled on a case-by-case basis (Lucero 1981).

LOCAL

Several plans have been prepared for San Juan County under various federal programs, for example: San Juan County Growth Management and Housing Plan, FmHA (New Mexico State Planning Division 1981), and San Juan County Energy Impact Strategy Program, EDA (San Juan County Planning Department 1977). San Juan County's 1990 Land Use Plan (San Juan County Commission 1978) covers only areas of the county which are predominantly privately owned (i.e., Farmington, Aztec, and Bloomfield). Similar land use/energy impact plans have been prepared for Crownpoint (Navajo Nation 1979) and Thoreau (McKinley Area Council of Governments 1980). These plans do not address specific proposed energy projects, although they do take into account the increase in population that will result from general energy development, including projects such as the NMGS. There is no county zoning in effect in any of the potentially affected counties.

4.0
ENVIRONMENTAL CONSEQUENCES

The Proposed Action and alternatives would not conflict with any existing formally adopted or formally proposed land use plans or policies in effect in the affected environment.

5.0

SPECIFIC MITIGATION MEASURES GENERATED BY THE IMPACT ASSESSMENT

No specific land use control mitigation measures are required, since the Proposed Action and alternatives do not conflict with any existing formally adopted or formally proposed land use plans or policies in force in the affected environment.

6.0
UNAVOIDABLE ADVERSE IMPACTS

Neither the Proposed Action nor any alternative would cause any unavoidable adverse impacts for land use plans or policies.

7.0

RELATIONSHIP BETWEEN THE SHORT-TERM USE OF THE AFFECTED ENVIRONMENT AND LONG-TERM PRODUCTIVITY

The relationship between short-term use and long-term productivity is not applicable to land use controls and constraints.

8.0

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Implementation of the Proposed Action and alternatives could predetermine certain future land use planning decisions.

9.0

COMPARISON OF ALTERNATIVES

Neither the Proposed Action nor any alternative would conflict with any existing formally adopted or formally proposed land use plans or policies in effect in the affected environment.

POSSIBLE NEW TOWN

1.0

AFFECTED ENVIRONMENT

The possible new town site would be located in an area that is currently classified as public lands under the management of the BLM. As required by the Federal Land Policy and Management Act of 1976 (FLPMA), BLM has prepared comprehensive Management Framework Plans (MFP) for various planning units in the area. The MFP for the Chaco and San Juan Planning Units (updated 1981) covers the area of the possible new town site. A relevant major recommendation in this MFP is the following:

- Make BLM public lands available for the Ute Mountain Exchange.

2.0

ENVIRONMENTAL CONSEQUENCES

The possible new town would not conflict with any existing formally adopted or formally proposed land use plans or policies in effect in the affected environment. (See discussion of Navajo-Hopi land dispute settlement implications in Appendix.)

Appendix
NAVAJO LAND SELECTION

As part of the settlement of the century-old land dispute between the Navajo and Hopi tribes, the U.S. Congress authorized the Navajos to select 35,000 acres of land in New Mexico within 18 miles of the reservation boundary (P.L. 93-531, 96-305). The land selected is to be the home of Navajos relocated from the former Joint-Use Area. In mid-March 1982, the Tribe selected lands that include the proposed NMGS site, as authorized by tribal resolution of October 22, 1981. (Navajo Tribal Council 1981; Brady 1981; Deal 1981; Verburgh 1982).

As noted in this report, BLM has proposed that these lands be made available to PNM for the proposed generating station, and ancillary facilities. (BLM 1982, 1981b). In addition, in March 1982 BLM proposed that the lands be withdrawn "subject to valid existing rights, from appropriation under the public land laws, including the mining laws. . . . The purpose of the proposed withdrawal is to protect the lands in and of a proposed exchange with the Public Service Company of New Mexico" (Federal Register 1982).

From a Navajo perspective, use of the land for the Proposed Action or alternatives could be perceived as a potential conflict with Navajo tribal plans and policies for use of these lands, in that this would preclude their option to acquire these lands for land dispute settlement purposes. Native American issues are discussed in more detail in Appendix D of the Social and Economic Conditions Technical Report.

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